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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,223	02/14/2006	Wolfgang Zirwas	14541680	6270

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
JAIN, ANKUR	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/568,223	ZIRWAS, WOLFGANG	
	Examiner	Art Unit	
	ANKUR JAIN	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

2. **Claim 23** is objected to because of the following informalities:

(a) "adjusting of a the symbol parameter" should be changed to "adjusting of the symbol parameter."

(b) “via a second transmitting channel” should be changed to “via the second transmitting channel” in order to abide by proper antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 23-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokao, US Patent 7,272,125 B2 (hereafter referenced as Hokao), in view of Komaili et al, US Patent 6,529,730 B1 (hereafter referenced as Kom).

Regarding **Claim 23, 31, and 32**, Hokao teaches “receiving a signal in a receiver station via a first transmitting channel from a sending station” (see Figure 5). The claimed limitation reads on the receiving section. Hokao also teaches “determining a channel parameter of the first transmitting channel using the receiver station” (see Column 6 lines 32-67). Hokao also teaches “adjusting a symbol parameter of a first data symbol to be transmitted from the receiver station to the sending station via a second transmitting channel, the adjusting based on a function of a value of the channel parameter of the first transmitting channel" (see Figure 5, Column 6 lines 32-67, and Column 7 lines 1-20). The claimed limitation reads on in the mobile unit, the channel switching instruction instructing a channel switching operation from the first channel parameter data to the second channel parameter data is received. Hokao also teaches “changing a symbol parameter of a second data symbol to be transmitted from the receiver station to the sending station by a mathematical operation opposite from adjusting of the symbol parameter of the first data symbol” (see Column 7 lines 45-67 and Column 8 lines 10-46). The claimed limitation reads on how the control section 7 sets the channel parameter data about the data format of the reception data signal such as a symbol rate, the number of pilot symbols, the number of data symbols, etc. Hokao does not teach “using a first frequency range and transmitting a second signal using a second frequency range.” However, Kom generally teaches “using a first frequency range and transmitting a second signal using a second frequency range” (see Column 1 lines 25-37 and Column 4 lines 29-41). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Hokao to incorporate using a

first frequency range and transmitting a second signal using a second frequency range as taught by Kom, for the purpose of increasing the versatility and functionality of the channel switching method of Hokao by implementing the FDD mode of Kom resulting in lower power transmissions from the "receiver station" to the "sending station," and higher power transmissions from the "sending station" to the "receiver station."

Regarding **Claim 24**, Hokao teaches "transmitting the first and second data symbols from the receiver station to the sending station; and ascertaining at the sending station the channel parameter of the first transmitting channel determined by the receiver station, based on the first and second data symbol received at the sending station" (see col. 6 lines 32-67, col. 7, lines 1-21, and see also Fig.4, col.7, lines 45-67, col.8, lines 1-35).

Regarding **Claim 25**, Hokao teaches "wherein the channel parameter of the first transmitting channel is at least one of a phase parameter and an amplitude parameter" (see Fig.4, col.7, lines 45-67, col.8, lines 1-35).

Regarding **Claim 26**, Hokao teaches "wherein said adjusting includes changing the symbol parameter of the first data symbol to be transmitted from the receiver station by at least one of addition and subtraction of the value of the channel parameter of the first transmitting channel" (see col.6, lines 32-67, col.7, lines 1-21).

Regarding **Claim 27**, Hokao teaches "wherein the first and second data symbol transmitted from the receiver station are pilot symbols" (see col.7, lines 45-67, col.8, lines 1-35).

Regarding **Claim 28**, Hokao teaches "wherein the first and second data symbols transmitted from the receiver station are user data" (see col.7, lines 50-67, col.8, lines 1-35).

Regarding **Claim 29**, Hokao teaches "wherein a plurality of available transmitting channels exist for transmission from the sending station to the receiver station, and said receiving, determining, adjusting, transmitting and ascertaining are repeated using each of the available transmitting channels as the first transmitting channel (see col.6, lines 32-67, col.7, lines 1-25).

Regarding **Claim 30**, Hokao teaches "wherein the receiver station has a plurality of receiving antennas and/or the sending station has a plurality of sending antennas, and one of the first transmitting channels is situated between one of the sending antennas and one of the receiving antennas (see Fig.5, col.7, lines 45-67, col.8, lines 1-46).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ankur Jain whose telephone number is 571-272-9747. The examiner can normally be reached on M-F, 9:00 am to 4:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuwen Pan, can be reached on 571-272-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ankur Jain/
Examiner, Art Unit 2618
08/09/2010

/Yuwen Pan/
Primary Examiner, Art Unit 2618